

WHAT IS CLAIMED IS:

1. A rotor braking device for a spinning reel that brakes a rotor rotatively mounted on a reel unit of the spinning reel in response to a pivoting of a bail arm that pivots between a line-winding position and a line-releasing position, said rotor
5 braking device comprising:
 - a moving member that is coupled to the bail arm and provided on the rotor so as to be movable between a first position that corresponds to the line-winding position and a second position that corresponds to the line-releasing position, a part of said moving member projecting toward the reel unit when said moving member is in the
10 second position; and
 - a braking member that includes a drag portion and a plurality of engagement portions, said drag portion frictionally and relatively rotatably engaging with the reel unit, said plurality of engagement portions engaging with said projecting part of said moving member when said moving member is in the second position, said drag
15 portion being frictionally rubbed against the reel unit when said projecting part of said moving member engages with one of said engagement portions.
2. The rotor braking device for a spinning reel set forth in claim 1,
wherein
20 said braking member is annular in shape,
said drag portion is formed on an inner periphery of said braking member, and
said engagement portions are formed on an outer periphery of said braking
member.

3. The rotor braking device for a spinning reel set forth in claim 2,

wherein

said braking member is made of a plurality of constituent members, and

said plurality of constituent members are press fitted to the reel unit by a

5 spring member.

4. The rotor braking device for a spinning reel according to claim 1,

wherein

said moving member is rod-shaped, a front end of said moving member being

10 bent toward a vicinity of a pivot center of the bail arm such that said front end extends

along a pivot axis of the bail arm and is rotatably supported by the bail arm, a rear end

of said moving member being bent toward a rotational axis of the rotor and being

supported by the rotor so as to be movable back and forth, a portion of said moving

member between said front end and said rear end being disposed so as to extend along

15 the rotational axis of the rotor.

5. The rotor braking device for a spinning reel set forth in claim 1,

wherein

said braking member includes an elastic annular member which has a cut out

20 portion, and

said braking member is press fitted to the reel unit by the elasticity of said
annular member.

6. The rotor braking device for a spinning reel set forth in claim 5,

25 wherein

5 said braking member further includes an elastic annular plate spring and a plurality of projections, said drag portion being formed on an inner periphery of said annular plate spring, said annular plate spring having a cut out portion formed thereon, said plurality of projections being provided on an outer periphery of said plate spring and extending radially outward therefrom, such that said projections form engagement portions.

7. The rotor braking device for a spinning reel set forth in claim 6,
wherein
- 10 each of said plurality of projections includes a first bent portion which is a portion that is bent radially outward at an outer periphery of said plate spring, and a second bent portion which is a portion bent from a tip of said first bent portion to extend along a rotational shaft of the rotor.
- 15 8. The rotor braking device for a spinning reel set forth in claim 7, further comprising
an annular washer member that is disposed between said braking member and the reel unit,
the tip of said first bent portion being bent toward the reel unit when said
20 braking member is mounted on the reel unit.

9. The rotor braking device for a spinning reel according to claim 8,
wherein
25 said washer member has a plurality of tongue portions projecting toward an inner periphery of said washer ring member.

10. A spinning reel, comprising:

a handle;

a reel unit rotatably supporting said handle;

5 a rotor supported at a front of said reel unit so as to be rotatable about a rotational shaft, said rotor including a rotor unit, a bail arm mounted on a front of said rotor unit for pivoting between a line-winding position and a line-releasing position, and a bail tripping mechanism that is mounted to said rotor unit for turning said bail arm and includes a rotor brake mechanism, said rotor brake mechanism being for

10 braking said rotor in response to a pivoting of said bail arm, said rotor brake mechanism including,

a moving member that is coupled to said bail arm and provided on said rotor so as to be movable between a first position that corresponds to said line-winding position and a second position

15 that corresponds to said line-releasing position, a part of said moving member projecting toward said reel unit when said moving member is in said second position; and

a braking member that includes a drag portion and a plurality of engagement portions, said drag portion frictionally and

20 rotatably engaging with said reel unit, said plurality of engagement portions engaging with said projecting part of said moving member when said moving member is in said second position, said drag portion being frictionally rubbed against said reel unit when said projecting part of said moving member engages with one of said engagement portions; and

a spool disposed at a front of said rotor so as to be freely movable back and forth, said spool being configured to accommodate fishing line wound around an outer periphery thereof.

5 11. The spinning reel set forth in claim 10, wherein
 said braking member is annular in shape,
 said drag portion is formed on an inner periphery of said braking member, and
 said engagement portions are formed on an outer periphery of said braking
member.

10 12. The spinning reel set forth in claim 11, wherein
 said braking member is made of a plurality of constituent members, and
 said plurality of constituent members are press fitted to said reel unit by a
spring member.

15 13. The spinning reel according to claim 10, wherein
 said moving member is rod-shaped, a front end of said moving member being
bent toward a vicinity of a pivot center of said bail arm such that said front end
extends along a pivot axis of said bail arm and is rotatably supported by said bail arm,
20 a rear end of said moving member being bent toward a rotational axis of said rotor
and being supported by said rotor so as to be movable back and forth, a portion of said
moving member between said front end and said rear end being disposed so as to
extend along said rotational axis of said rotor.

25 14. The spinning reel set forth in claim 10, wherein

said braking member includes an elastic annular member which has a cut out portion, and

said braking member is press fitted to said reel unit by the elasticity of said annular member.

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15. The spinning reel set forth in claim 14, wherein
said braking member further includes an elastic annular plate spring and a plurality of projections, said drag portion being formed on an inner periphery of said annular plate spring, said annular plate spring having a cut out portion formed thereon, 10 said plurality of projections being provided on an outer periphery of said plate spring and extending radially outward therefrom, such that said projections form engagement portions.

16. The spinning reel set forth in claim 15, wherein
15 each of said plurality of projections includes a first bent portion which is a portion that is bent radially outward at an outer periphery of said plate spring, and a second bent portion which is a portion bent from a tip of said first bent portion to extend along said rotational shaft of said rotor.

20 17. The spinning reel set forth in claim 16, further comprising
an annular washer member that is disposed between said braking member and
said reel unit,
the tip of said first bent portion being bent toward said reel unit when said
braking member is mounted on said reel unit.

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18. The spinning reel according to claim 17, wherein
said washer member has a plurality of tongue portions projecting toward an
inner periphery of said washer member.

5 19. The spinning reel according to claim 10, wherein
said reel unit includes a reel body and a lid member, a flange portion and a
cylindrical portion being further formed on a front of said reel body and said lid
member, a groove being formed in said cylindrical portion, and
said mounting member is mounted on said groove.

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